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P.O. Box 31
Clayton, Ohio 45315
25 August 1994

SECRETARY **FCC MAIL ROOM**
FEDERAL COMMUNICATIONS COMMISSION
1919 'M' STREET
WASHINGTON, DC 20554

Re: COMMENTS ON AUTOMATIC HF DIGITAL
OPERATION in NPRM PR-94-59

Gentlemen:

My name is Phil Sussman and I hold Amateur Radio License KB8LUJ. I have been active on digital modes and am a contributing writer to ham radio publications both in the United States and abroad. I also publish the **FACTOR WORLDWIDE USERS GROUP** newsletter and wish to take this opportunity to share views expressed by many individuals.

Digital growth has been explosive. New users appear daily and digital HF spectrum (10-160 meters) is at a premium. Old customary band plans did not anticipate the rapid expansion of digital modes or technology.

Customary definitions of **AUTOMATIC** (no control operators present), **SEMI-AUTOMATIC** (operator exists at one end) and **MANUAL** (operators at both ends) are **INADEQUATE**.

Here's how chaos reigns and why a plan is needed. Automatic or semi-automatic stations operate on fixed frequencies, and several sometimes share the same frequency. Severe difficulties are caused to manual QSOs by others parties attempting connections to multiple user systems, regardless of channel occupancy. Most of this interference is **NOT** deliberate, but is caused by the **HIDDEN TRANSMITTER EFFECT** where one station does not hear traffic yet can interfere with it.

Currently all users share the digital spectrum equally and mailboxes are scattered everywhere. The key is **TRAFFIC LOAD** and **NOT** whether a control operator is present. For example, a fully automatic station which is repeatedly 'polled' by stations will cause just as much interference as a semi-automatic station called manually by the same number of stations. Monitoring issues aside, (automatic stations can monitor before connecting same as manual stations) all that remains is volume. The issue is **NOT** automatic stations -vs- semi-automatic stations. Rather busy systems that handle **MULTIPLE USERS**, or relay **THIRD PARTY MESSAGES** need to be separated from other users.

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A plan is needed, THEREFORE, I propose that.....

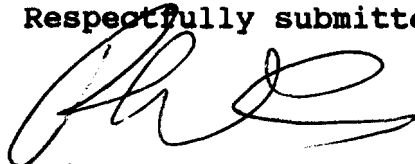
1. Automatic, semi-automatic, and manual operation be allowed anywhere within the permitted bands for digital operations.
2. Stations passing third party traffic (ie, Messages for one party on the system of another) which employ automatic or semi-automatic means be restricted to identified sub-bands.
3. Stations which permit connects on two or more frequencies at the same time (both nodes and gateways) be restricted to identified sub-bands.
4. Personal mailbox stations, for messages to or from a SINGLE USE CALLSIGN, be exempt from operation within identified sub-bands, provided they comply with items #2 and #3 above, operate in a manual or semi-automatic mode and do not exceed a bandwidth of 500 Hz. (Club calls or households with multiple calls hold potential for abuse if not limited.)
5. All automatic and semi-automatic stations must use equipment that will automatically monitor the operating frequency and not transmit if that frequency is in use by others.

These recommendations reduce potential interference by shifting heavy users away from manual users and personal mailboxes. Enforcement is easy, just monitor messages. If only automatic stations are moved to sub-bands, there is NO WAY TO POLICE operator presence. And it would **NOT** reduce interference from heavily used, multiple user mailboxes, some of which operate semi-automatically on several frequencies at once.

Any action of the Federal Communications Communications only effects those hams under its jurisdiction. But, many countries look to the FCC for planning guidance. As a result, I highly recommend any action of the Commission be made VOLUNTARY for an initial period before it became permanent. That would allow results to be judged and revised if necessary.

Separating only automatic stations is NOT best in the interest of the ham community because it does not fully address the problem. A voluntary approach is better and should be tried first, to avoid unnecessary oversight regulation and allow more flexibility in dealing with future modes and trends.

Respectfully submitted,



Phil Sussman - KB8LUJ

REVISION SUGGESTED TO PROPOSED SECTION 97.221

97.221 Automatically controlled digital station.

(c) A station may be automatically controlled while transmitting a RTTY or data emission on any other frequency authorized for such emission types provided that:

(1) The station is responding to interrogation by a station under local or remote control; and

(2) The station automatically monitors and will not accept a link if it detects the frequency is in use; and

(3) The station is not a node or gateway to another frequency nor does it accept or transfer third party messages; and

(4) No transmission from the automatically controlled station occupies a bandwidth of more than 500Hz.

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